926 Grant Ave
Rockford Ills

April 7/84

Dr A. Gray

My dear Sir

When I received that interesting collection of N. W. Arctic Salices from Mr Watson I looked the specimens over in a kind of bewildered mood and concluded to keep them on my table to brood over _ to work through in time cautiously, taking a step here and there and then stopping to consider if by possibility I could be mistaken before going further. But your request _ already too long held in abeyance precludes such leisurely ways and as you kindly ease up on a fellow by asking for a "talky talky report" subject to your criticism I will give you my present impressions

The collections from the Commander Islands present

No 136 a fragment only showing a single ♂ ament but though the material is so scant there can not be any doubt I think about the species _ S. speciosa H & A

Nos 23(?) 137 - 31 - 230 - 244 - 196 - several forms all referable - in my opinion to S. crassijulis "Turcz herb ex Trautv Sal Frig." - DC. Prod 16.2.285; Anderssons *S. Pallasii* seems to be another of those instances - like his *S. arguta* - where the right is assumed to impose a *new name* upon a *new aggregation* [illegible] the older names included as forms thereof

Turning now to the collections from Point Barrow the most strikingly interesting form No *65* is happily well represented both in ♂ & ♀ aments - mature capsules and leaves This can not be other than *S. ovalifolia* Trautv. Clearly our plant is an arctic modification of S. *myrtilloides* with subsessile capsules &c to distinguish it - It can not be S. *fuscescens* Anders which we know by the good figure in Botany of the Beechey Voyage - nor the doubtful variety *minor* described under that species - though the latter appears to be a transition toward our plant - Beyond these three there is no possible reference to be made in Anderssons Prodromus Monograph - And I may add that going over the description of S. *ovalifolia* critically to see if I could detect any difference to warrant the recognition of a new species I only ended in convincing myself that here our plants truly belonged.

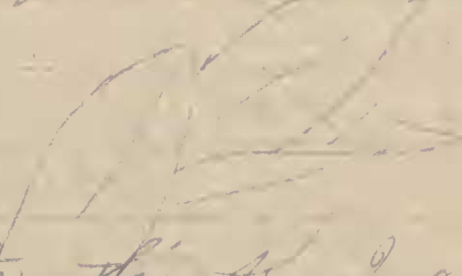
No 29 is another interesting form but one which can not be so clearly determined. I've seen in the book for *S. glacialis* And. in a collection of Willows from Point Barrow and to this species No 29 may belong. *Certainly* the "villous capsules, sessile, about twice the length of the scales" and "stigmas sessile bifid" together with a general agreement with the description seems to warrant such an inference but the stamens in our specimens are not "pallid" nor are the (very young) leaves "rigid" and "nervoso-lineatis". These discrepancies regarding the leaf might possibly disappear in specimens taken later in the season while on the other hand there remains the character of the capsule and *especially* the *sessile bifid stigmas* very peculiar among Arctic willows (where a produced style and laciniate stigmas is the rule). The locality too favors the probability of the plant's being *S. glacialis*, still I do not feel quite sure nor do I understand how *S. glacialis* with "stylo nullo" is arranged by the author in a group characterized by "stylo producto rostratis". I imagine that Andersson's plant, like our own must have been more unlike S. herbacea &c

April 7, 79

than its growth would suggest.
If now leaving No 29 collected in June we go on the study, in connection with it No 97 collected in August our perplexities are increased. Is this No 97 a mature growth of No 29? If so the difficulty about the leaves disappears but on the other hand we have an *evident style* There is thus in this ~~[illegible]~~ coincidence with Anderssons description (the lateral aments on the current years growth are clearly seen in No 97) which leads me to think that S. glacialis was founded on a form not essentially unlike either 29 or 97 – But if this conjecture is ~~well~~ ~~grounded~~ reasonable I do not see how these forms can be clearly distinguished from *S. arctica* (*forma pusilla* – to which at first glance I had referred Nos 6 & 97 – In other words I suspect that when we get more material – if indeed the present does not suffice it will be found that S. glacialis runs into S. arctica through intermediate forms such as Nos 17 & 6.

No 24. *S. rotundifolia* Trautv. This specimen seems to be a modification of S. polaris with *glabrous capsules* and as such embraces our plant.

Nos 41. 12. 9. S. fulcrata And. (so far as Seemans plant is concerned - I don't know about the other). This is clearly of the Phylicifolia group and is distinguished from S. chlorophylla mainly by the stipules - which you will observe persistent in various places where the leaves have fallen. These are linear and glandular serrulate thus The figure in the Monographia - from its crenate leaves and broad stipules is evidently not drawn from Seemans plant - of which I happily have a tracing - and fragments showing stipules exactly like those in our specimens. In the tracing of Seemans specimen the ♀ ament is shown fully developed accompanied by leaves like this



Come to think I might as well send you the tracing in the pkg. (Please return after you are through with it - The peculiar stipules are clearly the same as in our plants - as also the entire leaves. thus enabling us to escape being misled by Andersson's figure.

No 115 is a modification of the same

species. as is also No 89 (except a stray fragment of arctica which I have appropriated) — 616. also same.

And yet I question what disposition should be made of No 89. Andersson in his Salices Bor. Amer. fails to distinguish his S. fulcrata from S. phylicoides. For instance, he describes the capsules of phylicoides first as "2-3 lineas longae" and afterwards in DC Prod as "semilineam longae"! In DC. Prod he describes the stipules of phylicoides as "anguste lanceolatis" and those of fulcrata as "magnis lanceolato-ovatis" when we have example in hand of the type specimen to know that the stipules of fulcrata are not as he figures them but rather as he describes those of phylicoides — Altogether it is a bad mix-up which I am not prepared to straighten out. The aments of 41, 12, 9 open from the tip down as observed by Andersson — instead of in the usual manner

No 62 I do not recognize.

No 128 is evidently sent by mistake — I return all the [illegible] and have taken single specimens for my herbarium where there were duplicates

the space. For which please
accept my thanks—

I will return the specimens at
once—as you may wish to look
them over again— If you are led
to question any of the determinations
there given please tell me on
what grounds that I may correct
the mistake if there be one—or
sustain my position in "Talky Talky"
—a good deal of which has been
choked down—notwithstanding the
assertion appears on the seventh
page!

Yours very truly
M. S. Bebb

April 7, '88.